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CLAIM + DETAILED DESCRIPTION

[Claim(s)]

[Claim 1] In the system equipped with the furnace which heat-treats an organic waste, and the furnace which carries out gas combustion of the dry distillation gas which occurs at the furnace to heat-treat An ejector is prepared in the dry distillation gas exhaust of the furnace which is open for free passage at the dry distillation gas stream entrance of the furnace which carries out gas combustion through an exhaust gas duct and to heat-treat. The dry distillation gas heating concrete supply system characterized by having prepared the heat exchanger in the exhaust gas discharge system of the furnace which carries out gas combustion, and preparing the ejector air supply system which supplies the heating air heated by the heat exchanger to an ejector as drive gas.

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the technology of transporting the dry distillation gas which occurs when organic wastes (chaff, human waste sludge, livestock excrement, a pruning branch, a kitchen garbage, screenings, a food residual substance, etc.) are heat-treated, about a dry distillation gas heating concrete supply system.

[0002]

[Description of the Prior Art] When carbonizing an organic waste conventionally, the dry matter of the organic waste dried with the drier of the preceding paragraph is thrown into a carbonization furnace, and the inside of a furnace is heated by indirect heating, and it is made to carbonize in a carbonization furnace. At the carbonization furnace, with steam of the inactive gas supplied separately, the air in a furnace is driven out, the inside of a furnace is maintained at a reduction atmosphere, and dry distillation carbonization is performed under high temperature steam. Gas combustion is carried out in a deodorization furnace, and the bad smell gas which occurs with the dry distillation gas and the drier which are generated from a dry matter in a carbonization furnace is deodorized.

[0003]

[Problem to be solved by the invention] By the way, since the dry distillation gas which occurs in a carbonization furnace is the temperature of about 350 degrees, using a fan's etc. mechanical means for the ventilation means from a carbonization furnace to a deodorization furnace has a problem in

endurance. Moreover, if the miscellaneous ingredient is included and temperature falls, dry distillation gas will be Taal-ized and will adhere to an exhaust gas duct, and it acts as resistance to exhaust gas, and there is a problem which blockades an exhaust gas duct depending on the case.

[0004] This invention solves the above-mentioned technical problem, and it aims at offering a dry distillation gas heating concrete supply system transportable to furnaces which carry out gas combustion, such as furnaces, such as a carbonization furnace, to a deodorization furnace to heat-treat, without making dry distillation gas Taal-ize.

[0005]

[Means for solving problem] In order to solve the above-mentioned technical problem, [the dry distillation gas heating concrete supply system of this invention] In the system equipped with the furnace which heat-treats an organic waste, and the furnace which carries out gas combustion of the dry distillation gas which occurs at the furnace to heat-treat An ejector is prepared in the dry distillation gas exhaust of the furnace which is open for free passage at the dry distillation gas stream entrance of the furnace which carries out gas combustion through an exhaust gas duct and to heat-treat. A heat exchanger is prepared in the exhaust gas discharge system of a furnace which carries out gas combustion, and the ejector air supply system which supplies the heating air heated by the heat exchanger to an ejector as drive gas is prepared.

[0006] It flows into the furnace which the dry distillation gas which occurs by the above-mentioned composition at the furnace to heat-treat is inhaled by the ejector in connection with the drive gas supplied through an ejector air supply system, and carries out gas combustion through an exhaust gas duct. After burning in the furnace which carries out gas combustion, it is discharged to the exhaust gas discharge system of a furnace which carries out gas combustion as exhaust gas. The drive gas of an ejector is heated by a heat exchanger by making this exhaust gas into a heat source, and an ejector is supplied through an ejector air supply system.

[0007] Therefore, the dry distillation gas which flows into an ejector from the furnace to heat-treat flows into the furnace which carries out gas combustion through an exhaust gas duct, without Taal-izing, since it is heated by drive gas.

[0008]

[Mode for carrying out the invention] The form of operation of this invention is hereafter explained based on Drawings. In drawing 1 , about the rotary kiln type, the carbonization furnace 1 carries out the dry distillation carbonization of the organic wastes, such as nothing, chaff, human waste sludge, livestock excrement, a pruning branch, a kitchen garbage, screenings, and a food residual substance, and the organic waste is a dry matter 2 by processing in the drier (illustration abbreviation) of the preceding paragraph.

[0009] The carbonization furnace 1 is arranging the internal combustion tube 3 in an inside, and has connected the burner 4 to the heating fluid inflow mouth of the internal combustion tube 3. The carbonization furnace 1 has the entrance slot 5 of a dry matter 2 in the one end side, and has the carbide outlet 6 and the steamy feed opening 7 in the other end side.

[0010] The ejector 9 is formed in the dry distillation gas exhaust 8 of the carbonization furnace 1, and the dry distillation gas exhaust 8 is open for free passage at the dry distillation gas stream entrance 12 of the deodorization furnace 11 through the exhaust gas duct 10. The deodorization furnace 11 carries out gas combustion of the dry distillation gas, and equips the 1 side with the burner 13. The waste heat boiler 15 and the heat exchanger 16 which makes the heating device for ejector air are formed in the

exhaust gas discharge system 14 of the deodorization furnace 11, and the steamy supply system 17 is formed between the waste heat boiler 15 and the steamy feed opening 7. Between the heat exchanger 16 and the ejector 9, the ejector air supply system 18 which supplies the heating air heated by the heat exchanger 16 to an ejector 9 as drive gas is formed, and the ejector fan 19 is formed in the end face of an ejector air supply system 18.

[0011] The operation in the above-mentioned composition is explained hereafter. An organic waste is thrown into the carbonization furnace 1 from an entrance slot 5 as a dry matter 2, after making it dry with the drier of the preceding paragraph. At the carbonization furnace 1, indirect heating is carried out with the combustion gas of a burner 4 through the internal combustion tube 3 in the state where supplied the steam generated by the waste heat boiler 15 as inactive gas through the steamy supply system 17, drove out the air in a furnace, and it maintained at a reduction atmosphere, and the dry distillation carbonization of the dry matter 2 in a furnace is carried out under high temperature steam.

[0012] Taking out the carbonized carbide from the carbide outlet 6 out of a furnace, the dry distillation gas which occurred is inhaled by the ejector 9, is discharged from the dry distillation gas exhaust 8 to the exhaust gas duct 10, and flows into the deodorization furnace 11 from the dry distillation gas stream entrance 12. After heating the air supplied to an ejector 9 by the ejector fan 19 to predetermined temperature (about 400 degrees C) by the heat exchanger 16, it supplies as drive gas. For this reason, the dry distillation gas which flows into an ejector 9 from the carbonization furnace 1 flows into the deodorization furnace 11 through the exhaust gas duct 10, without Taal-izing, since it is heated by drive gas.

[0013] after dry distillation gas burns in the deodorization furnace 11 -- as exhaust gas -- deodorization -- it is discharged to the exhaust gas discharge system 14 of a tower 11. This exhaust gas is used as a heat source which heats the drive gas of an ejector 9 in the heat exchanger 16.

[0014]

[Effect of the Invention] [as mentioned above, the thing which is conveyed according to this invention heating the drive fluid of an ejector using the waste heat generated within a system, and heating dry distillation gas by drive fluid] It can transport to the furnace which carries out gas combustion from the furnace heat-treated without making dry distillation gas Taal-ize, and the blockade of that Taal which adhered in the exhaust gas duct is resisting, or an exhaust gas duct can be prevented.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the mimetic diagram showing the composition of the dry distillation gas heating concrete supply system in the form of operation of this invention.

[Explanations of letters or numerals]

- 1 Carbonization Furnace
- 2 Dry Matter
- 3 Internal Combustion Tube
- 4 Burner
- 5 Entrance Slot
- 6 Carbide Outlet
- 7 Steamy Feed Opening
- 8 Dry Distillation Gas Exhaust
- 9 Ejector
- 10 Exhaust Gas Duct
- 11 Deodorization Furnace
- 12 Dry Distillation Gas Stream Entrance
- 13 Burner
- 14 Exhaust Gas Discharge System
- 15 Waste Heat Boiler
- 16 Heat Exchanger
- 17 Steamy Supply System
- 18 Ejector Air Supply System
- 19 Ejector Fan

[Translation done.]